

10/618,111

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Application of:

Group Art Unit: 1712

Applicant: James D. B. Smith

Examiner: Michael J. Feely

Serial No.: 10/618,111

Atty. Docket: 2003P08574US

Filed: 07/11/2003

Title: Homogeneous Alumoxane-LCT-Epoxy Polymers and Methods for
Making the SameCommissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450DECLARATION OF JAMES D.B. SMITH UNDER 37 CFR 1.132

1. I, James D. B. Smith, hereby declare and state as follows.
2. I have studied for eight years at Aberdeen University, Scotland and Syracuse University, New York. I have worked for the assignee of the present invention and its predecessor organizations for over 35 years in the areas of high voltage electrical insulation polymers for motors and generators.
3. I am the inventor of the present application as well as the cited prior art reference U.S. patent 5,904,984 (Smith). I have thoroughly read and am familiar with the cited prior art reference U.S. patent 6,369,183 (Cook).
4. If the processes and materials described by Cook were to be applied to the LCT epoxy of Smith, the result would be undesirable for electrical insulation applications because of the specific chemical reactions discussed below.

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5. The amine functionalized carboxylate-alumoxanes used by Cook to prepare his alumoxane-epoxy materials exhibit reactivity with LCT epoxy that would cause disruption of the crystalline structure of the epoxy.

6. The formaldehyde used by Cook at column 10, line 59 is undesirable because it is highly volatile and reactively not compatibility with the Smith LCT resin compounds.

7. The water and waterborne systems of Examples 34, 36, 38 and 40 of Cook and the ethanol and cold water drop of Example 41 of Cook would destroy the crystal structure of the Smith LCT epoxy because of its volatility and hydrolysis of anhydride compounds.

8. The alternatives to covalent bonding that are described at column 17, lines 10-15 of Cook, including hydrogen bonding, acid-base interactions and charge transfer interactions, would destroy the functionality of the Smith LCT epoxy insulation because of the formation of ionic species that would have a detrimental effect on the high voltage electrical insulating properties by increasing the dissipation factor and reducing the electrical resistivity.

9. Based upon the factual evidence presented above, it is my professional opinion that a person skilled in the art at the time of the present invention would not be motivated to modify the LCT epoxy of Smith with the processes taught in Cook to arrive at the present invention because the functionality of the LCT epoxy for electrical insulation applications would be destroyed.

10. All statements made herein of my own knowledge are true, and all statements made of information and beliefs are believed true. I acknowledge that willful false statements and the like are punishable by fine or imprisonment, or both,

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and that such will false statements may jeopardize the validity of the application or any patent issuing thereon.

By: James D. B. Smith
James D. B. Smith

NOVEMBER 17, 2006
Date